

FBWA backbone network in the Baikal region

Requirements

- Extensive communication channels including connections over the water
- Reliable operation in conditions of fog, snowfall and low temperatures
- Transferring multiple traffic types
- Separate VLAN networks

Solution

- InfiLINK 2x2

Customer Benefits

- Cost-effective solution for the operator, allowing a large number of new subscribers to connect
- Reliable communication channels to connect public institutions and services

IRSN, the largest internet service provider in the Irkutsk region of Russia, provides communication services to government, corporate and private sector clients. Among its customers, IRSN provides connectivity to the Ministry of Emergency Situations in Russia and FSUE (the Federal State Unitary Enterprise of Radio and TV design). IRSN has also connected more than 200 schools in the region.



IRSN began its work with the use of satellite communication channels, but this struggled to cope with the rising number of subscribers and increased demand for faster internet access speeds. Satellite technology is also not capable of successfully carrying video conferencing, voice, and data traffic at the same time. This is due to the limitations of the existing satellite channels.

Faced with these difficulties when working on joint projects between the Ministry of Emergency Situations and the Federal State Unitary Enterprise of Radio and TV design, IRSN decided to upgrade the existing network backbone and transfer the channels to a broadband wireless access solution. Solutions from various manufacturers were tested. However, due to the low winter temperatures in the region they proved unstable.

Solution

IRSN approached Muvikom, a specialist provider of operator class telecommunication equipment, who decided to run tests using InfiNet equipment.

Several test sites were built and InfiNet's products demonstrated reliable performance, regardless of weather conditions. They also offered the full set of network functions required by the customer, including traffic prioritization and support for VLAN and QoS technologies, which allowed installation without third-party equipment.

"We have installed several dozens of radio channels which stretch over long distances. There were no problems with the installations. The largest distance of 60km is served with 78 Mbps. One of the divisions of the Ministry of Emergency Situations of the Russian Federation operates on this channel successfully."

**Sergei Kuzin,
CEO IRSN**

The solution delivered by InfiNet used wireless point-to-point equipment, the InfiLINK 2x2 series, with integrated plug high gain antennas. The length of the channels ranged from 11 to 60 km, with a capacity of up to 300 Mbps in 40 MHz.

The new backbone infrastructure is also used to connect IRSN networks to the network backbone operators – Rostelekom and Evrotel - with up to 90 Mbps.

"For this project, the main advantages of using InfiNet's solution is the reliable operation in low temperatures, heavy snow and fog and the fact that our equipment supports multiple VLAN connections, VPNs and QoS," said Roman Smirnov, Business Development Director for InfiNet.

Today, the total length of the main line based on InfiNet's solution is about 600 km, with more than 60 access points.